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EXAMINER

ROSSI, JESSICA

ART UNIT

PAPER NUMBER

1733

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5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/880,365

Applicant(s)

HANNA, MARK B.

Examiner

Jessica L. Rossi

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Pri d for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____ .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 15-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☒ Claim(s) 12-14 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,4 .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-14, drawn to a method, classified in class 156, subclass 108.
 - II. Claims 15-24, drawn to an apparatus, classified in class 257, subclass 434.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the apparatus as claimed can be used to practice another and materially different process such as one where only the annular sealing section is heated by concentrated energy and the window and frame are not heated (see US 5293511 cited in IDS; column 9, lines 20-23).
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. Smith on 6/9/03 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-14. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15-24 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Seelen (US 2708774).

With respect to claim 1, Seelen teaches providing a glass window 11 that is transmissive to radiation (column 2, lines 44-45), providing a metal frame 13 that has an opening through it (note that frame extends around entire periphery of window; Figure 1; column 2, line 46), providing an annular sealing section 23 between and in contact with the window and frame wherein the sealing section extends completely around the opening (Figures 1 and 3; column 2, lines 63-66; column 3, lines 50-53), heating the window, frame, and sealing section to the melting temperature of the sealing section (column 4, lines 15-25), which is below the melting temperatures of the window (column 3, lines 50-53) and frame (note that heat causes metal frame to expand, not melt; column 4, line 25-26), and cooling the window, frame, and sealing section to solidify the sealing section thereby forming a hermetic seal (column 4, lines 40-47).

Regarding claim 2, Seelen teaches the frame being metal (column 2, lines 63-64) and oxidizing the surface of the frame to be engaged by the sealing section (column 3, lines 67-71).

Regarding claim 11, Seelen teaches the sealing section being glass frit (column 3, lines 50-51).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art referred to by Chun (US 5352852).

With respect to claim 1, the prior art referred to by Chun teaches providing a glass window 7 that is transmissive to radiation, providing a ceramic frame 4 (portion mounted on substrate above lead fingers 5) that has an opening through it, providing an annular sealing section 8 between and in contact with the window and frame such that the sealing section extends completely around the opening wherein the sealing section has a melting point below that of the window and frame (Figure 1; column 1, lines 48-54). The reference is silent as to heating the window, frame, and sealing section and cooling the window, frame, and sealing section.

One reading the reference as a whole would have appreciated that the reason for using a sealing section having a lower melting point than the window and frame is so that these components are not damaged during heating thereof; therefore, it would flow that the window, frame, and sealing section are heated to melt the sealing section. Furthermore, the skilled artisan would have appreciated that cooling of the window, frame, and sealing section would take place upon termination of the heating step. However, if it is not taken that such cooling does take place, it would have been obvious to the skilled artisan to facilitate cooling of the window,

Art Unit: 1733

frame, and sealing section because this would expedite the process and only the expected results of solidifying the sealing section to form a hermetic seal between the window and frame would have been achieved.

9. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art referred to by Chun in view of Tu et al. (US 6559539), or alternatively, Tu in view of the prior art referred to by Chun. ⁿ

With respect to claim 1, it is noted that the examiner interpreted the Chun reference to mean that the frame 4 was not integral with the substrate below the lead fingers 5. If it is not taken that this is so, the skilled artisan would have appreciated that it is known in the art to form sensor packages by bonding a glass cover 32 to a frame 30, which is mounted to a substrate 10, as taught by Tu (Figure 1; column 2, line 43; column 3, lines 8-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the portion of the assembly above the lead fingers 5 to the substrate below the fingers because such is known in the art, as taught by Tu, where this would allow for the assembly to be comprised of different materials.

Alternatively, it would have been obvious to bond the glass cover and frame of Tu using the sealing section of the prior art referred to by Chun, which has a melting temperature below that of the window and frame, because this would prevent damage to the window and frame upon heating to form a hermetic seal between the same.

10. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. (US 2002/0035496 A1).

Art Unit: 1733

With respect to claim 1, Hasegawa teaches providing a ceramic window 1 that is transmissive to radiation (p. 4, [0031]; p. 5, [0036]), providing a metal frame 3 that has an opening through it (Figure 3; p. 4, [0031]), providing an annular sealing section 5 between and in contact with the window and frame wherein the sealing section extends completely around the opening (Figure 3; p. [0031]), and heating the window, frame, and sealing section to the melting temperature of the sealing section (p. 12; [0064]), which is below the melting temperatures of the window and frame (p. 4, [0034]; p. 4-5, [0035]). The reference is silent as to cooling the window, frame, and sealing section.

The skilled artisan would have appreciated that cooling of the window, frame, and sealing section would take place upon termination of the heating step. However, if it is not taken that such cooling does take place, it would have been obvious to the skilled artisan to facilitate cooling of the window, frame, and sealing section because this would expedite the process and only the expected results of solidifying the sealing section to form a hermetic seal between the window and frame would have been achieved.

Regarding claim 11, Hasegawa teaches the sealing section being a low melting point glass (p. 4, [0034]).

11. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita (JP 61-36969; abstract only) in view of Hall (US 4135789) and Hasegawa et al.

With respect to claim 1, Yamashita teaches providing a glass window 6 that is transmissive to radiation, providing a metal frame 15 that has an opening through it, providing an annular sealing section 7 between and in contact with the window and frame such that the sealing section extends completely around the opening wherein the sealing section is a low melting point

Art Unit: 1733

glass (Figure 1; abstract). The reference is silent as to heating the window, frame, and sealing section, the sealing section having a lower melting temperature than that of the window and frame, and cooling the window, frame, and sealing section.

It is known in the art to hermetically seal two components using a low melting point sealing glass where the sealing glass has a lower melting temperature than glass, ceramic, and metal components, as taught by Hall (column 2, lines 52-59) and Hasegawa (p. 4-5, [0035]); therefore, the skilled artisan would have appreciated that the low melting point sealing glass of Yamashita would have a lower melting point than that of the glass window and metal frame of Yamashita to thereby prevent damage to the same during sealing.

One reading the reference as a whole would have also appreciated that the reason for using a sealing section having a lower melting point than the window and frame is so that these components are not damaged during heating thereof; therefore, it would flow that the window, frame, and sealing section are heated to melt the sealing section. Furthermore, the skilled artisan would have appreciated that cooling of the window, frame, and sealing section would take place upon termination of the heating step. However, if it is not taken that such cooling does take place, it would have been obvious to the skilled artisan to facilitate cooling of the window, frame, and sealing section because this would expedite the process and only the expected results of solidifying the sealing section to form a hermetic seal between the window and frame would have been achieved.

Regarding claim 11, Yamashita teaches the sealing section being a low melting point sealing glass (abstract).

Art Unit: 1733

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seelen, as applied to claim 1 above.

Regarding claim 3, selection of a particular material for the frame would have been within purview of the skilled artisan at the time the invention was made.

13. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seelen, as applied to claim 2 above, and in view of Robichaud et al. (US 6261867).

Regarding claims 4 and 6, Seelen teaches oxidizing the metal frame in a wet nitrogen and hydrogen environment (column 3, lines 68-72) but is silent as to heating in a furnace. It would have been obvious to one of ordinary skill in the art at the time the invention was made perform the oxidation process by heating the frame in a furnace because such is known in the art, as taught by Robichaud (column 5, lines 2-5), where such facilitates oxidation in a gaseous environment.

Regarding claims 5 and 7, selection of heating temperatures and times would have been within purview of the skilled artisan depending on the materials used.

14. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seelen, as applied to claim 1 above, and in view of Turcotte et al. (US 6461537).

Regarding claim 8, Seelen teaches using the glass and frame assembly in a vehicle (column 1, lines 15-17); therefore, it would have been obvious to use borosilicate glass for the window because such is known in the vehicle window art, as taught by Turcotte (column 5, lines 21-25), where this type of glass imparts certain characteristics to the finished product.

15. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seelen, as applied to claim 1 above, and in view of McCurdy et al. (US 6265076).

Regarding claim 9, Seelen is silent as to the glass having an anti-reflective coating. It would have been obvious to provide the glass of Seelen with an anti-reflective coating because such is known in the art, as taught by McCurdy (column 1, lines 12-18), where such improves the optical properties of the glass. Selection of a side to place the coating thereon would have been within purview of the skilled artisan at the time the invention was made.

Regarding claim 10, selection of a particular type of anti-reflective coating would have been within purview of the skilled artisan at the time the invention was made.

16. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tu et al. and the prior art referred to by Chun as applied to claim 1 above, and further in view of Yamashita and Robichaud et al.

Regarding claim 2, Tu is silent as to the frame 30 being metal. It would have been obvious to use a metal frame because such is known in the art, as taught by Yamashita (abstract), where such a material provides strength to the finished product.

Tu is also silent as to oxidizing the frame. It would have been obvious to oxidize the frame of Tu prior to sealing because such is known in the art, as taught by Robichaud (column 4, line 66; column 5, lines 2-5), where this enhances the bonding properties of the metal.

17. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tu et al., the prior art referred to by Chun, Yamashita, and Robichaud et al. as applied to claim 2 above, and further in view of Applicant's information disclosure statement, paper no. 2, filed 6/13/01.

Regarding claim 3, selection of a particular metal for the frame would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to use ASTM F15 steel because such is known in the art, as disclosed by Applicants.

Art Unit: 1733

18. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tu et al., the prior art referred to by Chun, Yamashita, and Robichaud et al. as applied to claim 2 above, and further in view of Seelen.

Regarding claims 4 and 6, Robichaud teaches oxidizing in a nitrogen environment within a furnace (column 5, lines 2-5) but is silent as to a wet nitrogen or hydrogen furnace. Seelen teaches oxidizing a metal frame in a wet nitrogen and hydrogen environment (column 3, lines 68-72) before bonding the frame to a glass window by means of a sealing section but is silent as to heating in a furnace. It would have been obvious to one of ordinary skill in the art at the time the invention was made perform the oxidation process in a wet nitrogen or hydrogen environment because such is known in the art, as taught by Seelen, where such facilitates oxidation.

Regarding claims 5 and 7, selection of heating temperatures and times would have been within purview of the skilled artisan depending on the materials used.

19. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art referred to by Chun and Tu et al., or alternatively, Tu et al. and the prior art referred to by Chun as applied to claim 1 above and further in view of Matsuda et al. (US 4812420).

Regarding claim 8, the prior art referred to by Chun (column 1, lines 49-50) and Tu (column 3, lines 11-12) teach the window being glass, but is silent as to the glass being borosilicate. Selection of a particular glass would have been within purview of the skilled artisan. However, it would have been obvious to use borosilicate glass because such is known in the art, as taught by Matsuda (column 5, lines 39-41).

Art Unit: 1733

20. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art referred to by Chun and Tu et al., or alternatively, Tu et al. and the prior art referred to by Chun as applied to claim 1 above and further in view of Poradish et al. (US 5293511; provided in IDS).

Regarding claim 9, the prior art referred to by Chun and Tu are silent as to the window having an anti-reflection coating. It would have been obvious to provide the windows of the prior art referred to by Chun and Tu with an anti-reflection coating on the side of the window facing the frame because such is known in the art, as taught by Poradish (Figure 1; column 6, lines 35-44), where such improves the optical qualities of the window.

Regarding claim 10, selection of a particular type of anti-reflective coating would have been within purview of the skilled artisan at the time the invention was made.

21. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art referred to by Chun and Tu et al., or alternatively, Tu et al. and the prior art referred to by Chun as applied to claim 1 above, and further in view of Hall and Hasegawa et al.

Regarding claim 11, the prior art referred to by Chun is silent as to the type of material used for the sealing section, which has a lower melting point than the window and frame.

Selection of a type would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to use a low melting point sealing glass because such is known in the art, as taught by Hall (column 2, lines 52-59) and Hasegawa (p. 4-5, [0035]), and this material has a lower melting point than ceramic, glass and metal.

22. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al., as applied to claim 1 above, and in view of Robichaud et al.

Art Unit: 1733

Regarding claim 2, Hasegawa teaches the frame being metal (p. 4, [0031]). Hasegawa is silent as to oxidizing the frame. It would have been obvious to oxidize the frame of Hasegawa prior to sealing because such is known in the art, as taught by Robichaud (column 4, line 66; column 5, lines 2-5), where this enhances the bonding properties of the metal.

23. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. and Robichaud et al. as applied to claim 2 above, and further in view of Applicant's information disclosure statement, paper no. 2, filed 6/13/01.

Regarding claim 3, selection of a particular metal for the frame would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to use ASTM F15 steel because such is known in the art, as disclosed by Applicants.

24. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al. and Robichaud et al., as applied to claim 2 above, and further in view of Seelen.

Regarding claims 4 and 6, Robichaud teaches oxidizing in a nitrogen environment within a furnace (column 5, lines 2-5) but is silent as to a wet nitrogen or hydrogen furnace. Seelen teaches oxidizing a metal frame in a wet nitrogen and hydrogen environment (column 3, lines 68-72) before bonding the frame to a glass window by means of a sealing section but is silent as to heating in a furnace. It would have been obvious to one of ordinary skill in the art at the time the invention was made perform the oxidation process in a wet nitrogen or hydrogen environment because such is known in the art, as taught by Seelen, where such facilitates oxidation.

Regarding claims 5 and 7, selection of heating temperatures and times would have been within purview of the skilled artisan depending on the materials used.

Art Unit: 1733

25. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa, as applied to claim 1 above, and in view of Kajihara et al. (US 5122862) and Matsuda et al.

Regarding claim 8, Hasegawa teaches the window being ceramic (column p. 5, [0035]) but is silent as to the window being glass. It would have been obvious to use glass as an alternative to the ceramic for the window of Hasegawa because these materials are known in the art as alternatives for radiation transmission, as taught by Kajihara (column 1, lines 33-34), where only the expected results of transmitting radiation would have been achieved. Selection of a particular glass would have been within purview of the skilled artisan. However, it would have been obvious to use borosilicate glass because such is known in the art, as taught by Matsuda (column 5, lines 39-41).

26. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa et al., as applied to claim 1 above, and in view of Poradish et al.

Regarding claim 9, Hasegawa is silent as to the window having an anti-reflection coating. It would have been obvious to provide the window of with an anti-reflection coating on the side of the window facing the frame because such is known in the art, as taught by Poradish (Figure 1; column 6, lines 35-44), where such improves the optical qualities of the window.

Regarding claim 10, selection of a particular type of anti-reflective coating would have been within purview of the skilled artisan at the time the invention was made.

27. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita, Hall, and Hasegawa et al. as applied to claim 1 above, and further in view of Robichaud et al.

Regarding claim 2, Yamashita teaches the frame being metal (abstract). Yamashita is silent as to oxidizing the frame. It would have been obvious to oxidize the frame of Yamashita

Art Unit: 1733

prior to sealing because such is known in the art, as taught by Robichaud (column 4, line 66; column 5, lines 2-5), where this enhances the bonding properties of the metal.

28. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita, Hall, Hasegawa et al., and Robichaud et al. as applied to claim 2 above, and further in view of Applicant's information disclosure statement, paper no. 2, filed 6/13/01.

Regarding claim 3, selection of a particular metal for the frame would have been within purview of the skilled artisan at the time the invention was made. However, it would have been obvious to use ASTM F15 steel because such is known in the art, as disclosed by Applicants.

29. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita, Hall, Hasegawa et al., and Robichaud et al. as applied to claim 2 above, and further in view of Seelen.

Regarding claims 4 and 6, Robichaud teaches oxidizing in a nitrogen environment within a furnace (column 5, lines 2-5) but is silent as to a wet nitrogen or hydrogen furnace. Seelen teaches oxidizing a metal frame in a wet nitrogen and hydrogen environment (column 3, lines 68-72) before bonding the frame to a glass window by means of a sealing section but is silent as to heating in a furnace. It would have been obvious to one of ordinary skill in the art at the time the invention was made perform the oxidation process in a wet nitrogen or hydrogen environment because such is known in the art, as taught by Seelen, where such facilitates oxidation.

Regarding claims 5 and 7, selection of heating temperatures and times would have been within purview of the skilled artisan depending on the materials used.

Art Unit: 1733

30. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita, Hall, and Hasegawa et al. as applied to claim 1 above, and further in view of Matsuda et al.

Regarding claim 8, the Yamashita teaches the window being glass (abstract), but is silent as to the glass being borosilicate. Selection of a particular glass would have been within purview of the skilled artisan. However, it would have been obvious to use borosilicate glass because such is known in the art, as taught by Matsuda (column 5, lines 39-41).

31. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita, Hall, and Hasegawa et al., as applied to claim 1 above, and further in view of Poradish et al.

Regarding claim 9, Yamashita is silent as to the window having an anti-reflection coating. It would have been obvious to provide the window of with an anti-reflection coating on the side of the window facing the frame because such is known in the art, as taught by Poradish (Figure 1; column 6, lines 35-44), where such improves the optical qualities of the window.

Regarding claim 10, selection of a particular type of anti-reflective coating would have been within purview of the skilled artisan at the time the invention was made.

Allowable Subject Matter

32. Claims 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 12, the prior art fails to teach or suggest a method wherein the window is sealed to the frame using a sealing section comprising **first and second glass materials** that are **different and melt at a temperature below that of the window and frame** wherein the first glass material is an annular portion of the sealing section that extends around the opening of

Art Unit: 1733

the frame in contact with the window and spaced from the frame and the second glass material is an annular portion of the sealing section that extends around the opening of the frame in contact with the frame and spaced from the window, wherein the first and second glass materials are in contact with each other between the window and the frame.

Regarding claims 13-14, note that these claims depend on claims 12 and 13, respectively.

US 2768475 to Seelen et al. teaches a sealing section comprised of glass frit 19, that melts above the softening point of the glass, and glass frit 20, that melts below the softening point of the glass, where glass material 19 is in contact with the frame and spaced from the window while glass material 20 is in contact with the window and spaced from the frame (Figure 6) such that the glass materials contact each other between the window and frame (column 3, lines 13-30; column 3, line 65 – column 4, line 16). Because the glass material 19 melts at a temperature that is greater than the temperature at which softening of the glass occurs, this glass material must be applied to the frame and melted before applying the glass material 20 and the glass window (column 3, lines 13-18) to the frame. Therefore, Seelen fails to teach heating the window, frame, and sealing section (both glass materials) to a temperature at which the sealing section melts, wherein the sealing section melts at a temperature below that at which the window melts. In fact, Seelen teaches away from heating the window, frame, and sealing section (both glass materials) to a temperature at which both glass materials would melt because this would result in softening of the glass window due to the high melting temperature of glass material 19.

GB 2184475 to Richie et al. teaches bonding glass window 18 to frame 2 using a sealing section comprising adhesive tape 10 that has an “impact type adhesive” coated on the side of the tape facing the frame and an ultraviolet adhesive coated on the side of the tape facing the

Art Unit: 1733

window (p. 1, lines 25-65 and 66-70). Richie fails to teach or suggest the sealing section comprising first and second glass materials that are different and melt at a temperature below that of the window and frame wherein the window, frame, and sealing section are heated to melt the sealing section.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jessica L. Rossi** whose telephone number is **703-305-5419**. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael W. Ball can be reached on 703-308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Jessica L. Rossi
Patent Examiner
Art Unit 1733



jl原因
June 11, 2003



SAM CHUAN YAO
PRIMARY EXAMINER